

REMARKS

Claims 1, 5 and 7-12 are in the present application, claims 2-4 and 6 having been canceled by this Amendment. Reconsideration in view of the following remarks is kindly requested.

Claim Objections

The Examiner has rejected claim 1 because of an informality. Claim 1 has been corrected by this Amendment.

Claim Rejections Under 35 U.S.C. §112

The Examiner has rejected claims 6 and 11 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. By this Amendment, claim 6 has been canceled, and claim 11 amended to overcome any alleged indefiniteness. Withdrawal of the rejection is kindly requested.

Claim Rejections Under 35 U.S.C. §102

The Examiner has rejected claim 1 under 35 U.S.C. §102(b) as being clearly anticipated by Kurle et al. (U.S. Patent No. 6,106,735). This rejection is respectfully traversed.

Claim 1 has been amended to incorporate features from claims 2-4. Accordingly, Kurle et al. do not teach each of the features recited in amended claim 1. Withdrawal of the rejection is requested.

Claim Rejections Under 35 U.S.C. §103

The Examiner has rejected claims 1-12 under 35 U.S.C. §103(a) as being unpatentable over Kurle et al. in view of Sasaki, et al. (US 2002/0017862 A1). This rejection is respectfully traversed.

Initially, the rejections as to claims 2-4 and 6 is now moot. Claims 1 and 8 have been amended in an effort to further define the invention. The claimed invention is directed to packaging devices. Kurle et al. does not teach nor suggest the specified features recited in claims 1 and 8. The Examiner already admits that Kurle et al. is deficient in teaching a particular method for packaging devices. In fact, there is no real method disclosed in Kurle et al., only FIG. 1A relied on by the Examiner that shows raised portions between two layers of a wafer. The fact that a figure shows structure somewhat similar to what is discussed in Applicants' specification does not translate to a specified method, such as a method of packaging devices for being taught by Kurle et al. Yet, the Examiner contends that one would look to the plasma display art, and specifically, to Sasaki et al., in order to find a reference that teaches a method for packaging electronic acoustic devices such as TFRs.

Nevertheless, even assuming arguendo that Kurle et al. teach all that is alleged, which Applicants submit it does not, the skilled artisan would not look to the plasma display panel art to solve the problems the have been addressed in, and solved by, the present application. In other words, one would not be motivated to combine Sasaki et al. with Kurle et al. Accordingly, and as will be explained below, Applicants submit that the Examiner has (a) failed to make out a prima facie case of obviousness to combine Kurle et al. and Sasaki et al., essentially using Applicants' specification as a blueprint to piece together elements, and (b) has looked to a non-analogous art for a solution to the problem identified in the present application, and not in either Kurle et al. or Sasaki et al.

1. Rejection fails test for establishing prima facie case of obviousness.

Applicants direct the Examiner's attention to two recent cases decided by the Court of Appeals for the Federal Circuit (CAFC), In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed.Cir. 1999) and In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed.Cir. 2000). Both of these cases set forth very rigorous requirements for establishing a prima facie case of obviousness under 35 U.S.C. §103(a). To establish obviousness based on a combination of elements disclosed in the prior art, there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant. The motivation suggestion or teaching may come explicitly from one of the following:

- (a) the statements in the prior art (patents themselves)
- (b) the knowledge of one of ordinary skill art, or in some cases,
- (c) the nature of the problem to be solved.

See Dembiczak 50 USPQ at 1614 (Fed.Cir. 1999). In Kotzab, the CAFC held that even though various elements of the claimed invention were present (in two separate embodiments of the same prior art reference), there was no motivation to combine the elements from the separate embodiments, based on the teachings in the prior art.

In order to establish a prima facie case of obviousness under 35 U.S.C. §103(a), the Examiner must provide particular findings as to why the two pieces of prior art are combinable. See Dembiczak 50 USPQ2d at 1617. Broad conclusory statements standing alone are not "evidence".

In order to provide motivation for combining Kurle et al. and Sasaki et al. to reject claim 1, on page 2 of the Office Action of April 3, 2003, the Examiner asserts:

It would have been obvious . . . to lithographically form ridges in the method of Kurle because Sasaki teaches that it is a useful technique for forming ridges.

In order to provide motivation for combining Kurle et al. and Sasaki et al. to reject claim 8, on page 4 of the Office Action of April 3, 2003, the Examiner asserts:

It would have been obvious to use the method of Sasaki to form the raised ridges in the method of Kurle because Sasaki teaches that it is a useful technique for forming ridges to bond two substrates together with glass frit.

Applicants have read the entirety of Kurle et al. and Sasaki et al. several times and do not see how reading these references one of ordinary skill in art would think to combine Kurle et al. and Sasaki et al. FIG. 1A of Kurle et al. illustrates one step of a method for producing sensors, not packaging electronic devices. FIGS. 3 and 4 in Sasaki et al. describe various processes for building a plasma display panel for use in a digital video system, for example. The Examiner has not identified any teaching or suggestion, anywhere in Sasaki et al., in the process for manufacturing a gas discharge display panel would lead one skilled in the art to look to Sasaki et al. in order to figure out a way to package electronic acoustic devices such as TFRs, having acoustic (not light or optical) properties, for the purposes of reducing finer frit line width, limiting the effects of capacitive parasitic, each purpose of width influences acoustic properties,

or to determine cavity depth independent of frit thickness, etc. Accordingly, Applicants respectfully submit that claims 1, 5 and 7-12 are allowable for at least the reason that the Examiner has failed to establish a proper prima facie case of obviousness under 35 U.S.C. 103(a), in view of Dembiczak and Kotzab.

2. Examiner using Impermissible Hindsight.

The Examiner is using impermissible hindsight reconstruction to reject the claims. The Examiner has used the present application as a blueprint, selected a prior art method of wafer structure as the main structural device, and then searched other prior art for the missing elements without identifying or discussing *any specific evidence of motivation to combine*, other than providing conclusory statements regarding the knowledge in the art, motivation and obviousness. The Federal Circuit has noted that the PTO and the courts "cannot use hindsight reconstruction to *pick and choose among isolated disclosures in the prior art to deprecate the claimed invention*," In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1780, 1783 (Fed. Cir. 1988), and that the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight. Dembiczak, 50 USPQ2d at 1617. Applicants respectfully submit that claims 1, 5 and 7-12 are allowable for at least this additional reason.

3. Examiner has not provided requisite motivation to combine Sasaki et al. with Kurle et al.

The Examiner has not provided the requisite evidence to support his allegation that there is motivation to combine Kurle et al. and Sasaki et al., so as to render obvious that which Applicants have described. The essential factual evidence on the issue of obviousness is set forth in Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966) and extensive ensuing precedent. The patent examination process centers on prior art and the analysis thereof. When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or

suggestion to select and combine the references relied on as evidence of obviousness. See, e.g., McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001) ("the central question is whether there is reason to combine [the] references," a question of fact drawing on the Graham factors).

The Examiner has not provided the requisite showing of a suggestion, teaching, or motivation to combine the prior art references to reject claims 1, 5 and 7-12 in the present application. "The factual inquiry whether to combine references must be thorough and searching." Id. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'" (quoting C.R. Bard, Inc., v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998))); In re Dembiczak, 50 USPQ2d at 1617 ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."); In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) ("teachings of references can be combined only if there is some suggestion or incentive to do so.") (emphasis in original) (quoting ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)).

The Examiner must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious."); In re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references").

Accordingly, the Examiner has not adequately supported the selection and combination of Kurle et al. and Sasaki et al. to render obvious that which Applicants have described. The

Examiner's conclusory statement "because Sasaki teaches that it is a useful technique for forming ridges to bond two substrates together with glass frit" does not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). The Examiner must explain the reasoning behind his findings of motivation. Simply stating that combining Kurle et al. and Sasaki et al., "because Sasaki teaches that it is a useful technique for forming ridges" is an insufficient explanation for the alleged combination.

Further, the Examiner is reminded that deferential judicial review under the Administrative Procedure Act does not relieve the agency (in this case the USPTO) of its obligation to develop an evidentiary basis for its findings. To the contrary, the Administrative Procedure Act reinforces this obligation. See, e.g., Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Ins. Co., 463 U.S. 29, 43 (1983) ("the agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'") (quoting Burlington Truck Lines v. United States, 371 U.S. 156, 168 (1962)). In this respect, since the examiner has not provided the requisite suggestion in the references to make his alleged combination, the Examiner rejects the precedent in In re Sung Lee, 23 USPQ2d 1780 (Fed. Cir. 2002).

In its decision on Lee's patent application, the Board rejected the need for "any specific hint or suggestion in a particular reference" to support the combination of the Nortrup and Thunderchopper references. Omission of a relevant factor required by precedent is both legal error and arbitrary agency action. See Motor Vehicle Manufacturers, 463 U.S. at 43 ("an agency rule would be arbitrary and capricious if the agency . . . entirely failed to consider an important aspect of the problem"); Mullins v. Department of Energy, 50 F.3d 990, 992 (Fed. Cir. 1995) ("It is well established that agencies have a duty to provide reviewing courts with a sufficient explanation for their decisions so that those decisions may be judged against the relevant statutory standards, and that failure to provide such an explanation is grounds for striking down the action."). As discussed in National Labor Relations Bd. v. Ashkenazy Property Mgt. Corp.,

817 F.2d 74, 75 (9th Cir. 1987), an agency is "not free to refuse to follow circuit precedent."

Applicants submit that the Examiner has failed to provide a specific hint or suggestion in any of Kurle et al. and Sasaki et al. to support the alleged combination. In light of the weight of the above precedent, and in addition to the reasons in 1. and 2. above, Applicants respectfully submit that claims 1, 5 and 7-12 are allowable.

4. Sasaki et al. is Non-analogous art.

Electronic devices fabricated in a large scale integrated (LSI) manner by thin film deposition, etching, etc., need to be packaged so as to be easily handled, and so as to be reliable in the variety of environmental conditions that are typically present in electronic systems. For devices based on acoustic waves or mechanical motion, the part of the device that contains these acoustic waves must be isolated from intimate contact with packaging material, or the acoustic wave may be corrupted. The isolation can be achieved by forming a desired sized cavity of desired depth over the devices. It is preferred to form these cavities at the wafer scale, lowering the cost per part. One way to do this is to prepare a capping wafer to be bonded to a wafer that is prepared with devices. These wafers can then be bonded together, and thereafter the devices can be singulated (e.g., separated into individual devices).

The present invention thus provides a way to package electronic, acoustic devices such as TFRs by forming raised areas between substrate and a capping wafer that results in a finer frit line width, as compared to wafers manufactured in Kurle et al., for example. Kurle et al. is directed to a method of producing wafers and a wafer stack. The field of endeavor is thus methods of packaging or producing devices with thin bonding regions.

Sasaki et al. is directed to a gas discharge panel and method for manufacturing the same, for use in a plasma display such as a plasma display TV. Sasaki et al.'s process is of special interest in developing plasma display panels (PDPs) with improved brightness, and quality of display (e.g., less deterioration due to a gap perforating division walls between compartments 112, which are light emitting regions, see paragraphs [0027] and [0176] of Sasaki et al). Sasaki et al. has nothing to do with Applicants' field of endeavor.

The determination that a reference is from a non-analogous art is ... twofold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular

problem with which the inventor was involved. In re Wood, 202 USPQ 171, 174 (C.C.P.A. 1979).

Applicants submit that Siebert is not within the field of the inventors' endeavor. Siebert is also not reasonably pertinent to Applicants' invention, or to Kurle et al., for that matter.

A reference is reasonably pertinent if ... it is one which, because of the matter with which it deals, logically would have commended itself to the inventor's attention in considering his problem.... If a referenced disclosure has the same purpose as the claimed invention, the reference relates to the same problem ... if it is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it. In re Clay, 23 USPQ.2d 1058, 1060-61 (Fed. Cir. 1992).

Sasaki et al., at best, discloses a method of manufacturing a gas discharge panel. The present application provides a method for packaging acoustic electronic devices. FIG. 1A in Kurle et al.'s' is directed to manufacturing a sensor of a wafer stack. The inventors of the present invention would not look to Sasaki et al. to solve the problems identified by the present application (as Kurle et al. certainly does not address the problem), since Sasaki et al. provides no indication of the same purpose as the claimed invention---packaging electronic, acoustic devices as recited in claims 1 or 8. Applicants respectfully submit that claims 1, 5 and 7-12 are allowable for at least this additional reason.

Conclusion

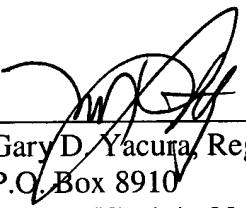
Applicant has already petitioned for a two month extension of time and has previously paid the fee of \$410.00, therefore it is believed that no fee is required.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Matthew J. Lattig at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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